

Message

From: Kay, Robert [rtkay@usgs.gov]
Sent: 3/5/2019 4:17:57 PM
To: Nordine, John [nordine.john@epa.gov]
Subject: EW-2 Well Monitoring

John--I have reviewed the Work Plan to Evaluate Extraction Well No. 2 Capture Zone developed by Autumwood ESH Consultants for the Techalloy/Central Wire facility in Union, Illinois. This document is Revision 1 and is dated March 2019.

I have a number of comments.

The text indicates the piezometers will be drilled at or near the water table. It would be best if the wells fully penetrated the aquifer. Second best is if the wells were open to the middle of the aquifer. Screening these wells at the water table may result in partial penetration effects on water levels that could result in an incorrect understanding of the magnitude of pumping effects.

If the piezometers are not going to be open to the entire aquifer, they ALL need to be 15 ft in length and screened at the same elevation.

The procedures for well development need to be discussed. How will development be done? what criteria will be used to determine when to stop development?

The pressure transducers Techalloy wants to use need to be adjusted for barometric pressure fluctuations. Unless Techalloy can detail how they plan on doing this, including how they plan on reading barometric pressure, I'd suggest using a transducer system (Troll for example) that automatically compensates for changes in barometric pressure.

I'd also suggest a 0-15 psi transducer to improve the resolution of the readings.

Depth of the pressure transducers should be based on depth below water level in the well, not depth of casing. A depth 15 ft or so below the water level in the well should be sufficient.

The text implies, but does not explicitly state, whether or not the elevations of the reference point and the piezometers will be surveyed. Clarification should be provided.

It's not enough to just note you'll collect manual water levels. The work plan should note how these levels will be checked against the transducer readings and corrected in real time, if necessary.

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